Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

DEVAL L. PATRICK
Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

October 25, 2013

Mr. Jack Klimp
CIANBRO Fabrication and Coating Corporation
3 Farm Lane
Georgetown, MA 01833

RE: **GEORGETOWN**
Transmittal No. X256568
Application No. NE-13-015
Class: Synthetic Minor 50
FMF No. 323282
AIR QUALITY PLAN APPROVAL

Dear Mr. Klimp:

The Metropolitan Boston/Northeast Regional Office of the Department of Environmental Protection (MassDEP), Bureau of Waste Prevention, has reviewed your Limited Plan Application ("Application") listed above. This application concerns the proposed construction, substantial reconstruction, alteration and/or operation of your fabrication and coating operations facility for large steel structures located at 3 Farm Lane in Georgetown, Massachusetts ("Facility").

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control," regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

CIANBRO Fabrication and Coating Corporation, a division of The CIANBRO Companies ("the Permittee"), is engaged in the fabrication and coating of large structural steel pieces used in buildings and bridges. The Permittee purchased this Facility in the Fall of 2012 from LB Foster Company. Due to this ownership change, the Permittee obtained the transfer of existing Final Approval MBR-08-IND-020 that was issued to Precise Structural Products, a division of LB Foster Company, on November 23, 2009 (the "existing Plan Approval").

The existing Plan Approval governs three operations: a) surface preparation operations using metal shot as an abrasive; b) surface cleaning operations using cleaning solvents; and c) paint spraying operations at the Facility. This Application proposes to add a fourth process operation, designated EU4, which is a blasting operation for surface preparation of the steel using coal slag, garnet, and crushed glass as an abrasive. The proposed operation of EU4 will result in an increase in particulate emissions.

Presently, the Permittee utilizes an 8-wheel Blastec blasting machine (EU1) to prepare raw steel material before it is coated with paint. A Blastec, Inc. Model No. GS-12 reverse pulse jet baghouse, designated Pollution Control Device 1 (PCD-1), is employed to control the particulate matter emissions from this blasting operation. The baghouse provides a minimum overall particulate collection and removal efficiency of 98 percent (%) by weight.

Volatile organic compounds (VOC) emissions occur from surface cleaning operations, designated Emission Unit 2 (EU2), which use VOC-containing solvents prior to spray painting the steel. In order for the Permittee's paint spraying operation to be exempted from the plan approval process under Plan Approval Exemption for Paint Spraying - 310 CMR 7.03(16), the facility would have to utilize a surface cleaning solvent with a VOC content not exceeding 1.67 pounds of VOC per gallon. Instead, the facility has identified tertiary butyl acetate (TBA) as a de-listed VOC solvent by the United States Environmental Protection Agency (USEPA) and is using it as a surface cleaning solvent. MassDEP has not had the opportunity to de-list TBA from its definition of VOC yet, so the Permittee is required to track TBA as a VOC until the compound has been de-listed by MassDEP, and shall thereafter track TBA emissions as a non-criteria air contaminant. The VOC emissions from surface cleaning operations are vented via the same two exhaust systems utilized by the paint spraying operations described below. The Permittee utilizes some of the re-claimed VOC material from its distillation still as a surface cleaning solvent.

Paint spraying operations are conducted in an indoor area which is approximately 50 feet by 100 feet. This area is located at the "north" end of the building and is used as one large spray paint booth, designated Emission Unit 3 (EU3). The exhaust from this area is captured by two exhaust systems, each of which contains a filter bank and an exhaust fan. These particulate filters, designated Pollution Control Device 2 (PCD-2), provide a minimum particulate control efficiency of 97% by weight. After the particulate matter is trapped within the dry air filters, the process air is vented by each exhaust fan through a 42 inch diameter stack the top of which is at least 10 feet above the roof. The stack gas exit velocity will be greater than 40 feet per second.

The Permittee uses six high volume low pressure (HVLP) spray guns in its spray painting operations. These spray guns are cleaned using a self-enclosed cleaning system that minimizes VOC (solvent) evaporation during cleaning, rinsing, and draining operations. The captured VOC-containing solvent is sent to a solvent distillation unit to re-claim the VOC-containing material used in its paint spraying operations. As a pollution prevention measure, The Permittee will utilize this reclaimed material in its spray gun cleaning operations and as a surface cleaning solvent.

The proposed blasting operations, EU4, will use a portable blasting machine in a separate, totally enclosed building unit that is located adjacent to the main Facility building. There is no stack gas exhaust point from this building. EU4, the portable blasting machine, will be used on large steel structures that are not able to be placed into EU1. The abrasive material used will be either coal slag, garnet or crushed glass. EU4 will have a capacity of 48 gallons of abrasive material. EU4 particulate emissions are calculated based on 520 operational hours per year and a blasting nozzle pressure of 90 pounds per square inch.

2. EMISSION UNIT (EU) IDENTIFICATION

Each emission unit identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1

EU#	Description	Design Capacity	Polllution Control Device (PCD)
EU1	A metal shot self-contained blasting machine.	Maximum blasting rate is 237,600 pounds of shot per hour.	PCD-1 Baghouse
EU2	A surface preparation cleaning operation where oil and dust are removed by hand wiping down the metal with either re-claimed VOC containing solvent or TBA.	Maximum rate of steel wiped is 500 square feet per hour	NA
EU3	A paint spraying operation where up to four coats of paint may be applied to the metal substrate.	Maximum paint application rate is 12.5 gallons per hour.	PCD-2 Dry air filters
EU4	A proposed portable blasting machine to put used for large assembled steel structures that cannot be accommodated by EU1. The proposed abrasive materials include coal slag, garnet, and crushed glass.	Maximum blasting rate is 3,125 pounds of shot per hour.	none

Table 1 Key:
EU = Emission Unit
NA = Not Applicable
TBA = tertiary butyl acetate
VOC = volatile organic compounds

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2 below:

Table 2

EU#	Operational/Production Limit	Air Contaminant	Emission Limit	
			Tons per month	Tons per 12 month rolling period
EU1	PCD-1 shall provide a minimum overall particulate emission control efficiency of 98% by weight.	PM/PM_{10}	0.5	1.0
EU2	EU2 shall only utilize TBA or re-claimed VOC containing solvent. No	VOC	0.0	0.0

Table 2				
EU#	**Operational/Production Limit**	**Air Contaminant**	**Emission Limit**	
			Tons per month	**Tons per 12 month rolling period**
	virgin VOC containing solvent may be utilized.			
EU3	PCD-2 shall provide a minimum overall particulate emission control efficiency of 97% by weight	PM/PM_{10}	1.0	2.4
EU4	520 operating hours per 12 month rolling period	PM/PM_{10}	1.0	6.1
Facility wide	NA	Any Single HAP	1.0	9.5
		Total HAPs	1.0	9.5
		VOC	1.0	9.5
		TBA	1.0	6.0
	After control by PCD-1 and PCD-2	PM/PM_{10}	2.0	8.5

Table 2 Key:
EU# = Emission Unit Number
PCD = Pollution Control Device
VOC = volatile organic compounds
HAP = hazardous air pollutant
TBA = tertiary butyl acetate
NA = not applicable
PM/PM_{10} = Total particulate matter including particles less than 10 microns in size

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5 below:

Table 3	
EU#	**Monitoring and Testing Requirements**
EU1	1) The pressure drop across PCD-1 shall be monitored daily, to ensure that the unit is operating with a pressure drop of less than 10 inches water gauge.
EU3	2) The pressure drop across each exhaust system associated with PCD-2 shall be monitored daily, to ensure that the unit is operating with a pressure drop of less than 1 inch water gauge.
EU4	3) Monitor the operating hours of the blasting period for EU4.
Facility-wide	4) Monitor the amount of re-claimed VOC solvent obtained by the solvent distillation unit each month as well as the amount of this re-claimed solvent that was utilized for spray gun cleaning, surface cleaning, or shipped out as a hazardous waste.
	5) Monitor Facility operations such that compliance with the restrictions and emission limitations/standards contained in Table 2 of this Approval can be determined.
	6) Monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	7) If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13.

Table 4	
EU#	**Record Keeping Requirements**
EU3	1) The Permittee shall maintain a fully completed BWP SFP-1 Form for each coating that will be used on EU3. These forms shall be made available for review by MassDEP personnel upon request.
EU4	2) The Permittee shall record the operating hours of blasting in EU4.
Facility-wide	3) The Permittee shall maintain records of the amount of re-claimed VOC solvent obtained by the solvent distillation still each month, as well as the amount of this re-claimed solvent that was utilized for spray gun cleaning, surface cleaning, or shipped out as a hazardous waste.
	4) The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .
	5) The Permittee shall maintain records of monitoring and testing as required by Table 3.
	6) The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EUs and PCDs approved herein on-site.
	7) The Permittee shall maintain a record of routine maintenance activities performed on the approved EU equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	8) The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EUs, PCDs and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	9) The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	10) The Permittee shall maintain all records or reports required by this Plan Approval on-site for five (5) years
	11) The Permittee shall make records required by this Plan Approval available to MassDEP or USEPA personnel upon request.

Table 5	
EU#	**Reporting Requirements**
EU3	1) Usage of exempt coatings shall be reported to MassDEP in accordance with 310 CMR 7.12.
Facility-wide	2) The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	3) The Permittee shall notify the Northeast Regional Office of MassDEP, BWP Permit Chief by email at NERO.air@massmail.state.ma.us or FAX at 978-694-3499, as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to Permit Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	4) The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP's written request.
	5) The Permittee shall submit to MassDEP for approval a stack emission test protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	6) The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

A. The Permittee shall comply with the Special Terms and Conditions as contained in Table 6 below:

Table 6	
EU#	**Special Terms and Conditions**
EU1	1) If any PCD-1 upset occurs and lasts for more than fifteen (15) minutes which prevents the Permittee from operating PCD-1 properly (i.e. a 98 percent by weight overall particulate control efficiency), then the Permittee shall discontinue operation of the EU1 until PCD-1 is repaired and operating properly.
EU3	2) The Permittee shall only be permitted to spray paint within the designated 50 feet by 100 feet area in the "north" end of the main Facility building.
	3) The Permittee shall only utilize HVLP spray guns or one of the other methods of spray application as identified in 310 CMR 7.03(16)(d).
	4) The Permittee shall utilize a dry fiber mat filter or equivalent system that achieves a particulate control efficiency of at least 97% by weight in EU3. In addition, the face velocity of air at the filter shall not exceed 200 feet per minute.
	5) Spray guns shall be cleaned in a device that: a. minimizes solvent evaporation during the cleaning, rinsing, and draining operations; b. recirculates solvent during the cleaning operation so that the solvent is reused; and, c. collects spent solvent in a container with a tight-fitting cover so that it is available for proper disposal or recycling.
	6) If any PCD-2 upset occurs and lasts for more than fifteen (15) minutes which prevents the Permittee from operating PCD-2 properly (i.e. a 97 percent by weight overall particulate control efficiency), then the Permittee shall discontinue operation of the EU3 until PCD-2 is repaired and operating properly.
EU1, EU3	7) The Permittee shall maintain operating and preventative maintenance logs on-site to document the proper operation and maintenance conducted on PCD-1 and PCD-2 in accordance with each SOMP.
EU4	8) The Permittee shall limit operation of EU4 to no more than 520 hours per 12 month rolling period.
Facility-wide	9) All VOC/HAPs containing materials, such as solvents and clean-up solutions, shall be transported and stored in tightly covered containers.
	10) All cleaning rags used in conjunction with the cleaning solutions shall be placed in tightly covered containers when not in use, and shall be collected for proper recycling or disposal.
	11) This Air Plan Approval letter, No. NE-13-015 supersedes Final Approval letter No. MBR-08-IND-020, issued to you by MassDEP on November 23, 2009, in its entirety. However, all plan application materials submitted as part of Final Approval No. MBR-08-IND-020 become part of Plan Approval NE-13-015.

Table 6 Key:
EU# = Emission Unit Number
PCD = Pollution Control Device

B. The Permittee shall install and maintain all exhaust stacks, as required in Table 7, on Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as "shanty caps" and "egg beaters." The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7 below, for the Emission Units that is regulated by this Plan Approval:

Table 7				
EU#	**Stack Height Above Ground (feet)**	**Stack Inside Exit Dimensions (feet)**	**Stack Gas Exit Velocity (feet per second)**	**Stack Gas Exit Temperature Range (^{o}F)**
EU1	18	1.0	6	ambient
EU2 and EU3	42	3.5	40	70-90
EU4	NA	NA	NA	NA

Table 7 Key:
EU# = Emission Unit Number
^{o}F = Degree Fahrenheit
NA = not applicable

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).

B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.

C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.

D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.

F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.

G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.

H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.

I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.

K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Joseph Su by telephone at 978-694-3200, or in writing at the letterhead address.

Very truly yours,

Joseph Su
Environmental Engineer
Bureau of Waste Prevention

James E. Belsky
Permit Chief
Bureau of Waste Prevention

cc: Board of Health, 1 Library Street, Georgetown, MA 01833
Fire Headquarters, 47 Central Street, Georgetown, MA 01833
DEP, Boston, Yi Tian (e-copy)
DEP, NERO - M. Persky